NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
DIVISION OF WASTE MANAGEMENT

MICHAEL F. EASLEY, GOVERNOR
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May 14, 2001

NFRAP
6/13/01
LF

Ms. Jennifer Wendel
NC Site Management Section
US EPA Region IV Waste Division
61 Forsyth Street, 11th Floor
Atlanta, Georgia 30303

Subject: Site Re-Assessment Report Prescore
Westinghouse Electric Meter and Light
EPA ID: NCD 003 195 963
Raleigh, Wake County, North Carolina

Dear Ms. Wendel:

The NC Superfund Section recommends Westinghouse Electric Meter and Light be assigned a disposition of "No Further Action (NFA)" under CERCLA.

Westinghouse Electric Meter and Light is located on US 1 North just off the I-440 Beltline in Raleigh, North Carolina. The site's geographic coordinates are 38°48'33.77" north latitude and 78°36'18.97" west longitude (Reference 2). The Westinghouse facility was built around 1953 and initially used only for assembly of meters until the plating equipment was installed. From 1954 to 1996 the facility manufactured and assembled all types of electrical metering devices for many residential and commercial applications.

In July 1984, a site inspection (SI) sampling event was conducted by staff members of the NC Division of Health Services (NCDHS), Solid and Hazardous Waste Management Branch. Sampling included three samples from an on-site intermittent drainage ditch, three source samples, and one subsurface soil sample.

An on-site intermittent drainage ditch was sampled at three locations during the SI: at the culvert upgradient (001267 and 001268), adjacent to the waste (001269 and 001270), and downgradient of the waste (001475 and 001476). Iron, manganese, and zinc were detected in all of the surface water samples (001267, 001269, and 001475). Chromium, lead, nickel, copper, iron, manganese, and zinc were detected in all three sediment samples (001268, 001270, and 001476). In addition to the above listed contaminants, arsenic (0.49 mg/l) was also detected in the upgradient sediment sample (001268) (Ref. 1). No samples were collected at or downstream of the probable point of entry (PPE).

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Three source samples were collected on site: one from the sludge in the surface impoundment for metals (001477), one from the sludge in the surface impoundment for volatile organics (001334), and one from a pile in the chem-fixed sludge area (001479). No volatiles were detected in the source sample from the sludge in the surface impoundment (001334). Barium (212 mg/l), cadmium (665 mg/l), chromium (936 mg/l), lead (34 mg/l), nickel (148 mg/l), copper (1,010 mg/l), cyanide (200 mg/l), zinc (2,270 mg/l), iron (3,720 mg/l), and manganese (103 mg/l) were detected in the sludge in the surface impoundment (001477). Arsenic (0.49 mg/l), cadmium (243 mg/l), chromium (767 mg/l), lead (54 mg/l), nickel (495 mg/l), cyanide (260 mg/l), copper (3,248 mg/l), zinc (5,150 mg/l), iron (7,425 mg/l), and manganese (146 mg/l) were detected in the pile in the chem-fixed sludge area (001479).

One subsurface soil sample was collected on site from the impoundment below the sludge (001478) at a depth of 6.5 to 7 feet. Barium (45 mg/l), chromium (225 mg/l), lead (10 mg/l), nickel (24.5 mg/l), copper (288 mg/l), iron (38,1000 mg/l), manganese (610 mg/l), and zinc (5.0 mg/l) were detected, though none of these levels exceeded Federal and State benchmarks for the protection of human health and the environment.

In December 1984, four downgradient groundwater monitoring wells were installed prior to the submittal of the closure plan for the surface impoundment. Initial groundwater sampling collected in December 1984 detected copper (0.14 mg/l), nickel (0.04 mg/l), cadmium (0.03 mg/l), and cyanide (0.10 mg/l) in well #2. The level of cadmium exceeded the Federal and State benchmark for the protection of human health and the environment and the NC groundwater standard.

Sampling collected in January 1985 from the four monitoring wells detected copper (0.03 mg/l) and cyanide (0.23 mg/l) in well #2. The level of cyanide exceeded the NC groundwater standard. By April 1985, cyanide was also detected in well #1 (0.02 mg/l) and well #3 (0.06 mg/l), and well #2 (0.19 mg/l) was still exceeding the NC groundwater standard. In addition to cyanide, nickel (0.05 mg/l) was detected in well #1 and copper (0.02 mg/l) was detected in well #2.

On July 31, 1985, the general manager of Westinghouse informed NCDHS of completed closure of the surface impoundment on site. The unit had been closed and all the sludge from the bottom of the impoundment had been removed. By April 1986, groundwater sampling in the monitoring wells showed all contaminants below detection limits or below applicable standards, with cyanide (0.14 mg/l) detected in well #2 and copper 0.12 mg/l) in well #4.

In the latter part of 1987, Westinghouse experienced a spill of an unknown quantity of perchloroethylene. When the release was discovered, the material was contained and the saturated soil was removed in a 5' x 10' area to a depth of 1 ½ - 2 feet. The area was inspected by the State, then backfilled. The area where the contaminated material was stockpiled was also inspected by the State following the removal to a secure landfill.

There are no residences, day care centers, or schools located on or within 200 feet of any portion of the former source areas. There are between 400 and 500 workers on the property in the original warehouse. However, based on previous removal information, all source and contaminated soils were removed from the site.

There are no groundwater users in the immediate area. Water is supplied to businesses and homes by the City of Raleigh's municipal water system.

Development in the area of the site has resulted in the elimination of the drainage ditch network previously in place for the property. All overland flow from the site enters the City of Raleigh's stormwater runoff system. The probable point of entry (PPE) for the site is approximately 2500 feet southwest of the site into a qualifying wetland. However, due to the large commercial activity and development in the area, it is not possible to show attribution to the site.

Based on a review of available file information and previous investigations of Westinghouse Elec. Meter & Light and the lack of targets, the site would score 0.60. If the previous removals were all qualifying and no wastes remained on the site, then the site would score 0.00. Therefore, the North Carolina Superfund Section recommends that the site be assigned a disposition of "No Further Action (NFA)" under CERCLA.

Please feel free to contact me at (919) 733-2801 ext. 317 or by e-mail at melanie.bryson@ncmail.net if you have any questions or comments.

Sincerely,

Melanie Bryson, EI
Environmental Engineer
NC Superfund Section

Dan LaMontagne, Head
Site Evaluation and Removal Branch
NC Superfund Section

CC: Scott Ross - File

PREScore 4.0
NPL Characteristics Data Collection Form

Record Information

1. Site Name: Westinghouse Elec Meter & Light Division
   (as entered in CERCLIS)

2. Site CERCLIS Number: NCD003195963

3. Site Reviewer: Melanie Bryson

4. Date: 5/2/01

5. Site Location: Raleigh/Wake, NC
   (City/County,State)

6. Congressional District: 4

7. Site Coordinates: Single

   Latitude: 38°48'33.8" Longitude: 078°36'19.0"

PREScore 4.0
NPL Characteristics Data Collection Form

Site Description

1. Setting: Urban

2. Current Owner: Other - Private/Office Lease

3. Current Site Status: Inactive

4. Years of Operation: Inactive Site,from and to dates: 1952-1993

5. How Initially Identified: State/Local Program

6. Entity Responsible for Waste Generation:

   - Manufacturing
   - Electronic Equipment

7. Site Activities/Waste Deposition:

   - Municipal Landfill
   - Drum/Container Storage
   - Discharge to Sewer/Surface Water
   - Spill

Waste Description

8. Wastes Deposited or Detected Onsite:

   - Inorganic Chemicals
   - Metals

PREScore 4.0
NPL Characteristics Data Collection Form

Response Actions

9. Response/Removal Actions:

   - Other Removal Action Has Occurred

RCRA Information

10. For All Active Facilities, RCRA Site Status:

    - -Treatment,Storage & Disposal Facility

Demographic Information

11. Workers Present Onsite: Yes

12. Distance to Nearest Non-Worker Individual: > 10 Feet - 1/4 Mile

13. Residential Population Within 1 Mile: 6100.0 (Estimated)

14. Residential Population Within 4 Miles: 50000.0 (Estimated)

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NPL Characteristics Data Collection Form

Water Use Information

15. Local Drinking Water Supply Source:

    - No Water Withdrawals Within Target Distance Limits

16. Total Population Served by Local Drinking Water Supply Source: 300000.0 (Estimated)

17. Drinking Water Supply System Type for Local Drinking Water Supply Sources:

    - Municipal (Services over 25 People)

18. Surface Water Adjacent to/Draining Site:

    - Stream

PREScore 4.0
HRS DOCUMENTATION RECORD

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   Latitude: 38°48'33.8" Longitude: 078°36'19.0"

	Score
Ground Water Migration Pathway Score (Sgw)	0.00
Surface Water Migration Pathway Score (Ssw)	0.00
Soil Exposure Pathway Score (Ss)	1.21
Air Migration Pathway Score (Sa)	0.00

Site Score	0.60

NOTE

Site names, and references to specific parcels or properties, are provided for general identification purposes only. Knowledge regarding the extent of sites will be refined as more information is developed during the RI/FS and even during implementation of the remedy.

PREScore 4.0
HRS DOCUMENTATION RECORD

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PREScore 4.0
GROUND WATER MIGRATION PATHWAY SCORESHEET

GROUND WATER MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release to an Aquifer		
Aquifer: Surficial		
1. Observed Release	550	550
2. Potential to Release		
2a. Containment	10	10
2b. Net Precipitation	10	0
2c. Depth to Aquifer	5	5
2d. Travel Time	35	35
2e. Potential to Release [lines 2a(2b+2c+2d)]	500	400
3. Likelihood of Release	550	550
Waste Characteristics		
4. Toxicity/Mobility	*	1.00E+02
5. Hazardous Waste Quantity	*	10
6. Waste Characteristics	100	6
Targets		
7. Nearest Well	50	0.00E+00
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	0.00E+00
8d. Population (lines 8a+8b+8c)	**	0.00E+00
9. Resources	5	0.00E+00
10. Wellhead Protection Area	20	0.00E+00
11. Targets (lines 7+8d+9+10)	**	0.00E+00
12. Targets (including overlaying aquifers)	**	0.00E+00
13. Aquifer Score	100	0.00
GROUND WATER MIGRATION PATHWAY SCORE (Sgw)	100	0.00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREScore 4.0
SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors DRINKING WATER THREAT	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	0
2. Potential to Release by Overland Flow		
2a. Containment	10	10
2b. Runoff	25	0
2c. Distance to Surface Water	25	25
2d. Potential to Release by Overland Flow [lines 2a(2b+2c)]	500	250
3. Potential to Release by Flood		
3a. Containment (Flood)	10	0
3b. Flood Frequency	50	0
3c. Potential to Release by Flood (lines 3a x 3b)	500	0
4. Potential to Release (lines 2d+3c)	500	250
5. Likelihood of Release	550	250
Waste Characteristics		
6. Toxicity/Persistence	*	1.00E+04
7. Hazardous Waste Quantity	*	10
8. Waste Characteristics	100	18
Targets		
9. Nearest Intake	50	0.00E+00
10. Population		
10a. Level I Concentrations	**	0.00E+00
10b. Level II Concentrations	**	0.00E+00
10c. Potential Contamination	**	0.00E+00
10d. Population (lines 10a+10b+10c)	**	0.00E+00
11. Resources	5	0.00E+00
12. Targets (lines 9+10d+11)	**	0.00E+00
13. DRINKING WATER THREAT SCORE	100	0.00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREScore 4.0
SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors HUMAN FOOD CHAIN THREAT	Maximum Value	Value Assigned
Likelihood of Release		
14. Likelihood of Release (same as line 5)	550	250
Waste Characteristics		
15. Toxicity/Persistence/Bioaccumulation	*	5.00E+07
16. Hazardous Waste Quantity	*	10
17. Waste Characteristics	1000	100
Targets		
18. Food Chain Individual	50	0.00E+00
19. Population		
19a. Level I Concentrations	**	0.00E+00
19b. Level II Concentrations	**	0.00E+00
19c. Pot. Human Food Chain Contamination	**	0.00E+00
19d. Population (lines 19a+19b+19c)	**	0.00E+00
20. Targets (lines 18+19d)	**	0.00E+00
21. HUMAN FOOD CHAIN THREAT SCORE	100	0.00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREScore 4.0
SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT SCORESHEET

SURFACE WATER OVERLAND/FLOOD MIGRATION COMPONENT Factor Categories & Factors ENVIRONMENTAL THREAT	Maximum Value	Value Assigned
Likelihood of Release		
22. Likelihood of Release (same as line 5)	550	250
Waste Characteristics		
23. Ecosystem Toxicity/Persistence/Bioacc.	*	5.00E+06
24. Hazardous Waste Quantity	*	10
25. Waste Characteristics	1000	56
Targets		
26. Sensitive Environments		
26a. Level I Concentrations	**	0.00E+00
26b. Level II Concentrations	**	0.00E+00
26c. Potential Contamination	**	0.00E+00
26d. Sensitive Environments (lines 26a+26b+26c)	**	0.00E+00
27. Targets (line 26d)	**	0.00E+00
28. ENVIRONMENTAL THREAT SCORE	60	0.00
29. WATERSHED SCORE	100	0.00
30. SW: OVERLAND/FLOOD COMPONENT SCORE (Sof)	100	0.00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREScore 4.0
SOIL EXPOSURE PATHWAY SCORESHEET

SOIL EXPOSURE PATHWAY Factor Categories & Factors RESIDENT POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
1. Likelihood of Exposure	550	550
Waste Characteristics		
2. Toxicity	*	1.00E+04
3. Hazardous Waste Quantity	*	10
4. Waste Characteristics	100	18
Targets		
5. Resident Individual	50	0.00E+00
6. Resident Population		
6a. Level I Concentrations	**	0.00E+00
6b. Level II Concentrations	**	0.00E+00
6c. Resident Population (lines 6a+6b)	**	0.00E+00
7. Workers	15	1.00E+01
8. Resources	5	0.00E+00
9. Terrestrial Sensitive Environments	***	0.00E+00
10. Targets (lines 5+6c+7+8+9)	**	1.00E+01
11. RESIDENT POPULATION THREAT SCORE	**	9.90E+04

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.
*** No specific maximum value applies, see HRS for details.

PREScore 4.0
SOIL EXPOSURE PATHWAY SCORESHEET

SOIL EXPOSURE PATHWAY Factor Categories & Factors NEARBY POPULATION THREAT	Maximum Value	Value Assigned
Likelihood of Exposure		
12. Attractiveness/Accessibility	100	1.00E+01
13. Area of Contamination	100	5.00E+00
14. Likelihood of Exposure	500	5.00E+00
Waste Characteristics		
15. Toxicity	*	1.00E+04
16. Hazardous Waste Quantity	*	10
17. Waste Characteristics	100	18
Targets		
18. Nearby Individual	1	1.00E+00
19. Population Within 1 Mile	**	4.00E+00
20. Targets (lines 18+19)	**	5.00E+00
21. NEARBY POPULATION THREAT SCORE	**	4.50E+02
SOIL EXPOSURE PATHWAY SCORE (Ss)	100	1.21

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.

PREScore 4.0
AIR PATHWAY SCORESHEET

AIR MIGRATION PATHWAY Factor Categories & Factors	Maximum Value	Value Assigned
Likelihood of Release		
1. Observed Release	550	0
2. Potential to Release		
2a. Gas Potential to Release	500	0
2b. Particulate Potential to Release	500	0
2c. Potential to Release	500	0
3. Likelihood of Release	550	0
Waste Characteristics		
4. Toxicity/Mobility	*	0.00E+00
5. Hazardous Waste Quantity	*	0
6. Waste Characteristics	100	0
Targets		
7. Nearest Individual	50	0.00E+00
8. Population		
8a. Level I Concentrations	**	0.00E+00
8b. Level II Concentrations	**	0.00E+00
8c. Potential Contamination	**	0.00E+00
8d. Population (lines 8a+8b+8c)	**	0.00E+00
9. Resources	5	0.00E+00
10. Sensitive Environments		
10a. Actual Contamination	***	0.00E+00
10b. Potential Contamination	***	0.00E+00
10c. Sens. Environments(lines 10a+10b)	***	0.00E+00
11. Targets (lines 7+8d+9+10c)	**	0.00E+00
AIR MIGRATION PATHWAY SCORE (Sa)	100	0.00E+00

* Maximum value applies to waste characteristics category.
** Maximum value not applicable.
*** No specific maximum value applies, see HRS for details.

PREScore 4.0
WASTE QUANTITY

1. WASTESTREAM QUANTITY SUMMARY TABLE, SOURCE: Waste Pile

a. Wastestream ID	
b. Hazardous Constituent Quantity (C) (lbs.)	0.00
c. Data Complete?	NO
d. Hazardous Wastestream Quantity (W) (lbs.)	0.00
e. Data Complete?	NO
f. Wastestream Quantity Value (W/5,000)	0.00E+00

PREScore 4.0
WASTE QUANTITY

2. SOURCE HAZARDOUS WASTE QUANTITY FACTOR TABLE

a. Source ID	Waste Pile		
b. Source Type	Waste Pile		
c. Secondary Source Type	N.A.		
d. Source Vol.(yd3/gal)	Source Area (ft2)	0.00	1.00
e. Source Volume/Area Value	7.69E-02		
f. Source Hazardous Constituent Quantity (HCQ) Value (sum of 1b)	0.00E+00		
g. Data Complete?	NO		
h. Source Hazardous Wastestream Quantity (WSQ) Value (sum of 1f)	0.00E+00		
i. Data Complete?	NO		
k. Source Hazardous Waste Quantity (HWQ) Value (2e, 2f, or 2h)	7.69E-02		

Source Hazardous Substances	Depth (feet)	Liquid	Concent.	Units
Arsenic	< 2	NO	4.9E-01	ppm
Cadmium	< 2	NO	2.4E+02	ppm
Chromium	< 2	NO	7.7E+02	ppm
Copper	< 2	NO	3.2E+03	ppm
Cyanide	< 2	NO	2.6E+02	ppm
Iron	< 2	NO	7.4E+03	ppm
Lead	< 2	NO	5.4E+01	ppm
Manganese	< 2	NO	1.5E+02	ppm
Nickel	< 2	NO	5.0E+02	ppm
Zinc	< 2	NO	5.2E+03	ppm

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WASTE QUANTITY

3. SITE HAZARDOUS WASTE QUANTITY SUMMARY

No.	Source ID	Migration Pathways	Vol. or Area Value (2e)	Constituent or Wastestream Value (2f,2h)	Hazardous Waste Qty. Value (2k)
1	Waste Pile	GW-SW-SE	7.69E-02	0.00E+00	7.69E-02

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WASTE QUANTITY

4. PATHWAY HAZARDOUS WASTE QUANTITY AND WASTE CHARACTERISTICS SUMMARY TABLE

Migration Pathway	Contaminant Values		HWQVs*	WCVs**
Ground Water	Toxicity/Mobility	1.00E+02	10	6
SW: Overland Flow, DW	Tox./Persistence	1.00E+04	10	18
SW: Overland Flow, HFC	Tox./Persis./Bioacc.	5.00E+07	10	100
SW: Overland Flow, Env	Etox./Persis./Bioacc.	5.00E+06	10	56
SW: GW to SW, DW	Tox./Persistence	1.00E+02	10	6
SW: GW to SW, HFC	Tox./Persis./Bioacc.	1.00E+05	10	32
SW: GW to SW, Env	Etox./Persis./Bioacc.	5.00E+06	10	56
Soil Exposure:Resident	Toxicity	1.00E+04	10	18
Soil Exposure: Nearby	Toxicity	1.00E+04	10	18
Air	Toxicity/Mobility	0.00E+00	0	0

* Hazardous Waste Quantity Factor Values
** Waste Characteristics Factor Category Values

Note: SW = Surface Water
GW = Ground Water
DW = Drinking Water Threat
HFC = Human Food Chain Threat
Env = Environmental Threat

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GROUND WATER PATHWAY AQUIFER SUMMARY

No.	Aquifer ID	Type	Overlaying No.	Connected with	Inter-Likelihood of Release	Targets
1	Surficial	Non K	0	0	550	0.00E+00

Containment

No.	Source ID	HWQ Value	Containment Value
1	Waste Pile	7.69E-02	10

Containment Factor 10

Net Precipitation

Net Precipitation (inches) 0.00

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GROUND WATER PATHWAY LIKELIHOOD OF RELEASE Surficial AQUIFER

Aquifer: Surficial

Type of Aquifer: Non Karst

Overlaying Aquifer: 0

Interconnected with: 0

OBSERVED RELEASE

No.	Well ID	Well Type	Distance (miles)	Level of Contamination
1	MW-2	Monitoring Well	0.000	Level II
2	MW-4	Monitoring Well	0.000	Level II

No.	Hazardous Substance	Well Concent.	MCL	Cancer	RFD	Units
1	Cyanide	1.4E+02	2.0E+02	0.0E+00	7.3E+02	ppb
2	Copper	1.2E+02	1.3E+03	0.0E+00	0.0E+00	ppb

Observed Release Factor 550

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GROUND WATER PATHWAY LIKELIHOOD OF RELEASE Surficial AQUIFER

POTENTIAL TO RELEASE

Containment

Containment Factor	10

Net Precipitation

Net Precipitation Factor	0

Depth to Aquifer

A. Depth of Hazardous Substances	0.00	feet
B. Depth to Aquifer from Surface	0.00	feet
C. Depth to Aquifer (B - A)	0.00	feet
Depth to Aquifer Factor	5	

Travel Time

Are All Layers Karst?	NO	
Thickness of Layer(s) with Lowest Conductivity	0.00	feet
Hydraulic Conductivity (cm/sec)	0.0E-00	
Travel Time Factor	35	

Potential to Release Factor	400

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GROUND WATER PATHWAY WASTE CHARACTERISTICS

Source: 1 Waste Pile

Source Hazardous Waste Quantity Value: 0.08

Hazardous Substance	Toxicity Value	Mobility Value	Toxicity/ Mobility Value
Arsenic	10000	1.00E-02	1.00E+02
Cadmium	10000	2.00E-03	2.00E+01
Chromium	10000	1.00E-02	1.00E+02
Copper	0	1.00E-02	0.00E+00
Cyanide	100	2.00E-05	2.00E-03
Iron	1	1.00E-02	1.00E-02
Lead	10000	2.00E-05	2.00E-01
Manganese	10000	1.00E-02	1.00E+02
Nickel	10000	2.00E-05	2.00E-01
Zinc	10	2.00E-03	2.00E-02

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GROUND WATER PATHWAY WASTE CHARACTERISTICS

Hazardous Substances Found in an Observed Release

Well No.	Observed Release Hazardous Substance	Toxicity Value	Mobility Value	Toxicity/ Mobility Value
1	Cyanide	100	1.00E+00	1.00E+02
2	Copper	0	1.00E+00	0.00E+00

PREScore 4.0
GROUND WATER PATHWAY WASTE CHARACTERISTICS

Toxicity/Mobility Value from Source Hazardous Substances:	1.00E+02
Toxicity/Mobility Value from Observed Release Hazardous Substances:	1.00E+02
Toxicity/Mobility Factor:	1.00E+02
Sum of Source Hazardous Waste Quantity Values:	7.69E-02
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	6

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GROUND WATER PATHWAY TARGETS FOR AQUIFER Surficial

Population by Well

No.	Well ID	Sample Type	Distance (miles)	Level of Contamination	Population

- N/A and/or data not specified

Level I Population Factor: 0.00

Level II Population Factor: 0.00

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GROUND WATER PATHWAY TARGETS FOR AQUIFER Surficial

Potential Contamination by Distance Category

Distance Category (miles)	Population	Value
> 0 to 1/4	0.0	0.00E+00
> 1/4 to 1/2	0.0	0.00E+00
> 1/2 to 1	0.0	0.00E+00
> 1 to 2	0.0	0.00E+00
> 2 to 3	0.0	0.00E+00
> 3 to 4	0.0	0.00E+00

Potential Contamination Factor: 0.000

Nearest Well

Level of Contamination: N.A.

Nearest Well Factor: 0.00E+00

Resources

Resource Use: NO

Resource Factor: 0.00E+00

Wellhead Protection Area

No wellhead protection area

Wellhead Protection Area Factor: 0.00E+00

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SOIL EXPOSURE PATHWAY RESIDENT POPULATION THREAT LIKELIHOOD OF EXPOSURE

Likelihood of Exposure

No.	Source ID	Level of Contamination
1	Waste Pile	Level I

Likelihood of Exposure Factor: 550

Source No.	Hazardous Substance	Depth (ft.)	Concent.	Cancer	RFD	Units
1	Arsenic	< 2	4.9E-01	4.3E-01	2.3E+01	ppm
1	Cadmium	< 2	2.4E+02	0.0E+00	3.9E+01	ppm
1	Chromium	< 2	7.7E+02	0.0E+00	3.9E+02	ppm
1	Copper	< 2	3.2E+03	0.0E+00	0.0E+00	ppm
1	Cyanide	< 2	2.6E+02	0.0E+00	1.6E+03	ppm
1	Iron	< 2	7.4E+03	0.0E+00	0.0E+00	ppm
1	Lead	< 2	5.4E+01	0.0E+00	0.0E+00	ppm
1	Manganese	< 2	1.5E+02	0.0E+00	1.1E+04	ppm
1	Nickel	< 2	5.0E+02	0.0E+00	1.6E+03	ppm
1	Zinc	< 2	5.2E+03	0.0E+00	2.3E+04	ppm

NOTE:
All source assumed moved from property. However, even if source is not completely removed, threat via soil exposure pathway is minimal.

PREScore 4.0
SOIL EXPOSURE PATHWAY RESIDENT POPULATION THREAT WASTE CHARACTERISTICS

Source: 1 Waste Pile

Source Hazardous Waste Quantity Value: 0.03

Hazardous Substance	Toxicity Value
Arsenic	10000
Cadmium	10000
Chromium	10000
Copper	0
Cyanide	100
Iron	1
Lead	10000
Manganese	10000
Nickel	10000
Zinc	10

Toxicity Factor:	1.00E+04
Sum of Source Hazardous Waste Quantity Values:	2.94E-02
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	18

PREScore 4.0
SOIL EXPOSURE PATHWAY RESIDENT POPULATION THREAT TARGETS

Targets

Level I Population:	0.0	Value:	0.00
Level II Population:	0.0	Value:	0.00
Workers:	500.0	Value:	10.00
Resident Individual:	Potentia	Value:	0.00
Resources:	NO	Value:	0.00

Terrestial Sensitive Environment	Value
- N/A and/or data not specified	

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Terrestrial Sensitive Environments Factor: 0.00

PREScore 4.0

SOIL EXPOSURE PATHWAY NEARBY POPULATION THREAT LIKELIHOOD OF EXPOSURE

Likelihood of Exposure

No.	Source ID	Level of Contamination	Attractiveness/ Accessibility	Area of Contam. (sq. feet)
1	Waste Pile	Level I	10	1

Highest Attractiveness/Accessibility Value: 10
Sum of Eligible Areas Of Contamination (sq. feet): 1
Area of Contamination Value: 5

Likelihood of Exposure Factor Category: 5

Source No.	Hazardous Substance	Depth (ft.)	Concent.	Cancer	RFD	Units
1	Arsenic	< 2	4.9E-01	4.3E-01	2.3E+01	ppm
1	Cadmium	< 2	2.4E+02	0.0E+00	3.9E+01	ppm
1	Chromium	< 2	7.7E+02	0.0E+00	3.9E+02	ppm
1	Copper	< 2	3.2E+03	0.0E+00	0.0E+00	ppm
1	Cyanide	< 2	2.6E+02	0.0E+00	1.6E+03	ppm
1	Iron	< 2	7.4E+03	0.0E+00	0.0E+00	ppm
1	Lead	< 2	5.4E+01	0.0E+00	0.0E+00	ppm
1	Manganese	< 2	1.5E+02	0.0E+00	1.1E+04	ppm
1	Nickel	< 2	5.0E+02	0.0E+00	1.6E+03	ppm
1	Zinc	< 2	5.2E+03	0.0E+00	2.3E+04	ppm

PREScore 4.0

SOIL EXPOSURE PATHWAY NEARBY POPULATION THREAT WASTE CHARACTERISTICS

Source: 1 Waste Pile

Source Hazardous Waste Quantity Value: 0.03

Hazardous Substance	Toxicity Value
Arsenic	10000
Cadmium	10000
Chromium	10000
Copper	0
Cyanide	100
Iron	1
Lead	10000
Manganese	10000
Nickel	10000
Zinc	10

Toxicity Factor:	1.00E+04
Sum of Source Hazardous Waste Quantity Values:	2.94E-02
Hazardous Waste Quantity Factor:	10
Waste Characteristics Factor Category:	18

PREScore 4.0
SOIL EXPOSURE PATHWAY NEARBY POPULATION THREAT TARGETS

Nearby Individual

Population within 1/4 mile: 100.0 (Estimated)

Nearby Individual Value: 1.0

Population Within 1 Mile

Travel Distance Category	Number of People	Value
> 0 to 1/4 mile	100.0	0.1
> 1/4 to 1/2 mile	1000.0	0.7
> 1/2 to 1 mile	5000.0	3.3
	Population Within 1 Mile Factor:	4.0

NOTE:
Population values estimated. Total population for the City of Raleigh, which area is greater than that of 4-mile radius, exceeds 290,000 people.